

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of searching digital communication signals in a system, the method comprising:

combining a plurality of channel measurements;

providing output of the combining of channel measurements as an added input to the **combining a** plurality of channel measurements; and

acquiring a signal symbol based on results from the combining of channel measurements without addressing **[[all]] every** timing hypothesis individually via a correlation operation.

2. (Currently Amended) The method of claim 1, wherein the combining comprises subjecting an input  $S_1$  and an input  $S_2$  to obtain an output  $S_T$  using a combining operation defined by the equation:

$$S_T = \ln \left( \frac{\frac{e^{S_1+S_2}}{(1+e^{S_1})(1+e^{S_2})} + \frac{e^{-(S_1+S_2)}}{(1+e^{-S_1})(1+e^{-S_2})}}{\frac{e^{S_1-S_2}}{(1+e^{S_1})(1+e^{-S_2})} + \frac{e^{-(S_1-S_2)}}{(1+e^{-S_1})(1+e^{S_2})}} \right).$$

**where  $S_1$  is a first channel measurement,  $S_2$  is either a second channel measurement or an output of another combining operation, and  $S_T$  is result of the combining of  $S_1$  and  $S_2$ .**

3. (Original) The method of claim 2, wherein the output  $S_T$  becomes an input for another combining operation.

4. (Original) The method of claim 1, further comprising multiplying a received chip by a channel reliability factor and providing the product as a channel measurement.

5. (Currently Amended) **[[The]] A method ~~of claim 4~~ of searching digital communication signals in a system, the method comprising:**

**combining a plurality of channel measurements;**

providing output of the combining of channel measurements as an added input to the combining a plurality of channel measurements;

acquiring a signal symbol based on results from the combining of channel measurements without addressing every timing hypothesis individually via a correlation operation; and

multiplying a received chip by a channel reliability factor and providing the product as a channel measurement,

wherein the channel reliability factor is determined using:

$$R = 4 \left( \frac{E_c}{N_o} \right) \left[ \frac{1}{\sqrt{E_c}} \right]$$

where R is the channel reliability factor, Ec is a signal level and No is a noise level.

6. (Original) The method of claim 1, wherein the plurality of channel measurements comprises channel measurements  $S_{n-1}$  through  $S_{n-15}$  where n is an iteration number and spacing of the measurements is 1 chip.

7. (Original) The method of claim 1, wherein determining acquisition of a signal symbol based on results from the combining of channel measurements comprises detecting results from the combining of channel measurements that exceed a predetermined threshold.

8. (Original) The method of claim 7, wherein the predetermined threshold is programmable.

9. (Canceled).

10. (Canceled).

11. (Currently Amended) ~~[[The]]~~ A method of claim 10, of performing a number of correlations against hypothesized PN sequences from digital communication signals in a system including a plurality of buffers, the method comprising:

separating digital communication samples into a plurality of sample groups;

performing partial sums on the plurality of sample groups; and

combining results of the performed partial sums to obtain a correlation,

**wherein performing partial sums on the plurality of sample groups comprises rotating and combining all combinations of the plurality of sample groups, and**

wherein rotating and combining all combinations comprises rotating each sample by all 4 possible phases of a single PN chip, combining for 16 possible combinations for every pair of samples.

12. (Currently Amended) The method of ~~claim 9~~ **claim 11**, wherein the ~~additions of combining~~ results from each of the ~~addition-permutations~~ **partial sums** comprises a coherent combining.

13. (Original) A method of searching digital communication signals in a system including a plurality of buffers, the method comprising

locating digital samples in an even phase group of sample buffers or an odd phase group of sample buffers based on the phase of a particular digital sample;

providing digital samples from the even phase group of sample buffers or the odd phase group of sample buffers to a demodulator as needed by the demodulator; and

providing digital samples from the even phase group of sample buffers or the odd phase group of sample buffers to a searcher when not needed by the demodulator.

14. (Currently Amended) The method of claim 13, further comprising entering a power down state upon **performing providing** a sufficient number of ~~correlations~~ **digital samples to the searcher**.

15. (Original) The method of claim 14, further comprising leaving the power down state when a new block of data is available.